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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,379	11/05/2001	Garrick Macnle	CYM-037	4705
41696	7590	04/07/2006	EXAMINER	
VISTA IP LAW GROUP LLP 12930 Saratoga Avenue Suite D-2 Saratoga, CA 95070			FINEMAN, LEE A	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/008,379

Applicant(s)

MAENLE ET AL.

Examiner

Lee Fineman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12/23/05.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 130-144 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 130-144 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 30 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group III in the reply filed on 23 December 2005 is acknowledged. Claims 130-144 are pending.

### ***Specification***

2. The disclosure is objected to because of the following informalities: In the Brief Description of Drawings section, page 12, line 14, "FIG. 2" should add --including FIGS. 2A and 2B--. Appropriate correction is required.

### ***Claim Objections***

3. Claims 130-144 are objected to because of the following informalities:

The limitation "course focus" is incorrect throughout the claims. The limitation should be --coarse focus--.

The limitation "an in-focus coordinate" is used in both coarse focusing steps and fine focusing steps (see, for example, claims 132 and 133). To prevent confusion, it is recommended that the limitations be distinguished as --a fine in-focus coordinate-- and --a coarse in-focus coordinate--.

Regarding claim 137, the limitation "the estimated in-focus coordinate" lacks antecedent basis.

The dependent claims inherit the deficiencies of the claims from which they depend. Appropriate correction is required.

*Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 130-140 and 142-144 are rejected under 35 U.S.C. 102(b) as being anticipated by Fairley et al., US 5,783,814.

Regarding claim 130, Fairley et al. disclose an automatic focusing method (see figs. 3, 6-8 and 13) for an optical system (see fig. 1) comprising: performing an initial coarse focus action (see column 4, lines 12-36 and column 25, line 39-column 26, line 4) along a focal axis (Z) at a scan position corresponding to a point on a surface of a slide (in so far as at least the first spot on the target 112 in a line or area scan can be considered a coarse focus action); and respectively performing a plurality of subsequent fine focus actions (see column 4, lines 12-36 and column 25, line 39-column 26, line 4) along a plurality of focal axes (Z axes along line or area scan) at a plurality of scan positions (along x or y axes based on line or area scan) corresponding to different points on the slide surface (using x-mirror 106 and y-mirror 108), wherein the performance of at least one of the fine focus actions comprises obtaining images of the slide at a plurality of coordinates within a predetermined range along the respective focal axis (see at least figs. 7-8).

Regarding claim 131, Fairley et al. further disclose wherein the coordinates (701-732, fig. 8A) are evenly distributed within the predetermined range (column 21, lines 52-53).

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Regarding claim 132, Fairley et al. further disclose wherein the performance of each fine focus action comprises determining an in-focus coordinate (203, see figs. 7 and 8) along the focal axis (Z axis).

Regarding claim 133, Fairley et al. further disclose wherein the performance of each coarse focus action comprises determining an in-focus coordinate (203, see fig. 6) along the focal axis (Z axis).

Regarding claim 134, Fairley et al. further disclose wherein the performance of each fine focus action is based on the in-focus coordinate determined in the coarse focus action (column 19, lines 29-32).

Regarding claim 135, Fairley et al. further disclose wherein the performance of each the fine focus actions comprises estimating an in-focus coordinate (203, fig 7) along the respective focal axis as a function of the in-focus coordinate (203, fig. 6) determined in the coarse focus action and a global focal plane (operating range of fine z-stage, see column 19, lines 29-38).

Regarding claim 136, Fairley et al. further disclose wherein the performance of the coarse focus action (see fig. 6) comprises repeatedly obtaining an image of the slide at different coordinates (504, 506) along the focal axis until an in focus coordinate (203) is determined.

Regarding claim 137, Fairley et al. further disclose wherein the performance of each of the fine focus actions (see fig. 7) comprises obtaining images of the slide at predetermined (within  $\pm 10$  microns, see column 19, lines 29-38) coordinates (604, 605) along the focal axis at relative to an estimated in focus coordinate (203) along the respective focal axis.

Regarding claim 138, Fairley et al. further disclose wherein the performance of each of fine focus action comprises selecting one (203) of the plurality of coordinates (203, 604, 605) as

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an in-focus coordinate based on an examination of the images (highest intensity image, i.e. "brightest layer," see column 4, lines 32-46).

Regarding claims 139 and 140, Fairley et al. further disclose wherein the performance of at least one of the coarse focus action and each fine focus action comprises: obtaining images of the slide at a plurality of coordinates (see fig. 6, 203, 504, 506 or fig. 7, 203, 604, 605) along the focal axis (Z); determining a plurality of focus scores (value based on intensity of the image signal); and selecting one of the coordinates (203) as an in-focus coordinate based on the maximum focus score (highest intensity image, i.e. "brightest layer," see column 4, lines 32-46).

Regarding claim 142, Fairley et al. further disclose wherein the coarse focus action and the fine focus action are performing during a single image scan (column 25, lines 39-43).

Regarding claim 143, Fairley et al. further disclose wherein the performance of one or both of the coarse focus action and fine focus actions comprises moving an element (120 and/or 122) of the optical system relative to the slide surface to coordinates along the respective focal axes.

Regarding claim 144, Fairley et al. further disclose wherein the performance of the fine focus actions comprises moving an element (x-mirror 106 and/or y-mirror 108) of the optical system relative to the slide along a scan axis (X axis and/or Y axis) to the respective scan positions.

### *Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 141 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fairley et al. in view of Luck et al., US 5,257,182.

Fairley et al. disclose the claimed invention except for explicitly stating wherein the slide carries a biological specimen. Examining biological specimens is extremely well known in the microscope art. For example, Luck et al. teach in fig. 1 examining a biological specimen (column 4, lines 59-67 on 16) with a microscope system (12). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the specimen/target of Fairley et al. a biological specimen as taught by Luck et al. to review a cell for malignancies (Luck, column 1, lines 12-17).

### *Conclusion*

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (571) 272-2313. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

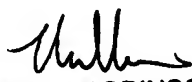
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LAF

April 3, 2006



MARK A. ROBINSON  
PRIMARY EXAMINER